

RES MEDICA

Journal of the Royal Medical Society



HISTORICAL ARTICLE

Schizophrenia – From devilry to disease

Ruaridh Owen¹

¹Medical Student, University of Sheffield Medical School

Correspondence email: ruaridhowen@hotmail.co.uk

Abstract

Symptoms of psychotic diseases historically instilled fear and distrust in onlookers, who associated them with witchcraft, demonic spirits, and the devil. From Egyptian medicine to medieval witch hunts, psychotic diseases have been associated with the supernatural throughout history. Yet even with advancements in neuroscience and improvements in our understanding of mental illness, stigma surrounding mental health remains prevalent today. Schizophrenia is a psychiatric illness which has evaded a clinical definition until relatively recently; even now, the precise features that constitute a schizophrenic patient are open to dispute. This article explores the ancient history of mental health with a particular emphasis on psychosis, and also considers the changing attitudes and understanding of schizophrenia throughout the last century, leading to its clinical definition as a treatable condition.

Copyright Royal Medical Society. All rights reserved. The copyright is retained by the author and the Royal Medical Society, except where explicitly otherwise stated. Scans have been produced by the Digital Imaging Unit at Edinburgh University Library. Res Medica is supported by the University of Edinburgh's Journal Hosting Service: <http://journals.ed.ac.uk>

ISSN: 2051-7580 (Online) ISBN: 0482-3206 (Print)

Res Medica is published by the Royal Medical Society, 5/5 Bristo Square, Edinburgh, EH8 9AL

Res Medica, 2014, 22(1): 126-132.

doi:10.2218/resmedica.v22.i1.746.

Schizophrenia – From devilry to disease

Introduction

Schizophrenia is a neurological disorder manifested by a variety of symptoms including hallucinations, delusions, and often disorder of speech. However, it is a condition which has evaded a clinical definition until relatively recently.¹ In the past, symptoms of psychosis have been attributed to the heart and paranormal entities, and it has been only in the last 150 years that the various forms of schizophrenia have been characterised as a single mental condition, by Dr Emil Kraepelin.² The symptoms of schizophrenia, particularly paranoid schizophrenia, have been described for thousands of years, including in Ancient Egyptian medicine, Hindu culture, Ancient Greece and China, and have been the source of much persecution and adversity for those with the disease.³ By highlighting possible references to schizophrenia in history, a clearer view of not only the changes in medical definitions of psychosis, but also the changes in public opinion of those considered psychotic, may be formulated.

Ancient medicine

Some of the oldest medical texts originate from Ancient Egypt, and a closer analysis provides an insight into the attitudes towards mental diseases of that time. The

Papyrus Ebers, a scroll written around 1500 BC, contains references to mental conditions with associated diagnoses. However, it appears that the academics of that time assumed the heart and mind to be of the same entity: “When the Heart is miserable and is beside itself, behold it is the Breath of the heb-xer Priest”.⁴ The Ancient Egyptians therefore diagnosed most conditions as diseases of the heart, occasionally attributing particular conditions on the invasion of demons, a theme that was common throughout many ancient medical texts.³ Apart from containing references to some mental disorders, such as depression, the Papyrus Ebers do not contain any direct descriptions of schizophrenia, contrary to what Theocharis Kyziridis argues in his *Notes on the History of Schizophrenia*.³ Nevertheless, it is worth citing these ancient papyri as some of the first recorded references to disorders of the mind.

Mental illness and schizophrenia-like conditions appear in ancient Hindu culture, with symptoms being mentioned in many texts of that time, including the *Atharva Veda*.⁵ It was believed that good health was maintained through the interactions of “Buthas” and “Dosas”, and that if these two entities were unbalanced, insanity may result.³ The *Atharva Veda* contains a multitude of hymns to cure ill health, some of which were used to cure “possession by

demons of disease". One particular extract makes reference to someone who "has been maddened by the sin of the gods, or been robbed of sense by the Rakshas" – the stereotypes of madness are often synonymous with the symptoms of schizophrenia. Therefore, it could be argued that the disease was present in this ancient population. This text also highlights the recurring attitude that such a condition must be caused by devilry or a sinister entity.⁵

Much like the Ancient Egyptian medicine 500 years before, Chinese medicine revolved around the concept that the heart was the centre of the mind and spirit, as depicted in *The Yellow Emperor's Classic of Internal Medicine*: "The heart controls the spirit, the spleen controls ideas". Symptoms of insanity and madness were therefore associated with diseases infecting the heart, with the cause being "evil influences" or an imbalance between "Yin" and "Yang".⁶

In 400 BC, Hippocrates described mental conditions as problems of the brain and was one of the first to record these diseases as tangible, medical conditions: "... from the brain only, arise our pleasures, joys, laughter and jests, as well as our sorrows, pains, griefs and tears. [...] Madness comes from its moistness."⁷ Although ground breaking in his time, the work of Hippocrates was often met with scepticism and misunderstanding from the public.⁷

Ancient diagnoses of diseases were summarized in a medical handbook, written by Aretaeus in the second century AD. Symptoms of schizophrenia were depicted as conditions of "mania" and "melancholy", with treatment methods revolving around a theory of humoral pathology and a rectification of imbalances of the body.³ Humoral pathology was also practised by Galen, who attributed mental disorders to a disease of the brain and welcomed the possible involvement of other organs, marking an improvement in the approach to mental disorders and setting the foundation for further advancements in the field that would later become psychiatry.⁸

The Middle Ages

The writings of Aretaeus and Galen developed the notion of mind–body unity. However, the concept of Galenism that predominated medical thinking throughout the Middle Ages, brought to Europe through Arabic writings, was often at odds with cultural beliefs and myths of the time, and instead religious superstition dominated the field of mental health.^{9,10}

Despite the founding of Europe's first "asylum" in the 15th century, the general public viewed hallucinations and delusions as justification of demonic possession and witchcraft.¹¹ Upon confession, "witches" were made to recount their seduction by the devil, which often occurred at times when

they were psychologically vulnerable. These alleged conversations with Satan are similar to auditory hallucinations experienced by paranoid schizophrenics, making it possible that many persecuted witches may have been sufferers of the disease.^{11,12} In the 15th century, the practice of exorcism was developed as a treatment for demonic possession. Although theories and explanations of mental disorders have radically changed in the last 600 years, exorcisms are still performed by various extremists and cults as a cure for what is now viewed as a treatable mental condition.¹²

The 16th century was an age of reformation, featuring radical cultural changes throughout Europe. None was more significant than the unshackling of medical science from the religious and cultural superstitions of the time. With the end of the Middle Ages also came the demise of an era of witch hunts and exorcisms. However, the foundations of fear towards mental disease had been laid and would prove more difficult to uproot.⁹

Emil Kraepelin and Eugen Bleuler

Two of the most notable psychiatrists of 19th century Europe, Emil Kraepelin and Eugen Bleuler, were instrumental in the development of modern definitions of schizophrenia. Kraepelin combined the previously defined disease entities of hebephrenia, catatonia, and his own

paranoid form into one condition when he described “dementia praecox”. In his text *Manic-Depressive Insanity and Paranoia*, Kraepelin describes many symptoms consistent with modern concepts of schizophrenia.^{2,13,14} However, the term “dementia praecox” was later considered inaccurate by Bleuler, as the disease was based on an end stage of dementia, and suggested inappropriate treatment methods.¹⁵ As a result, in 1919, Dr Elmer Ernest Southard proposed the term “dementia praecox” to be dropped in favour of Bleuler’s term “schizophrenia”, which he had coined 8 years earlier.^{3,16} The word “schizophrenia” is derived from the Greek words *schizo* and *phren*, to mean “split mind”. Bleuler originally intended this to depict the disjointed and often confused thoughts of sufferers of the disease, however, this has also been the source of many misconceptions surrounding schizophrenia, such as its incorrect association with multiple personality disorder.¹⁷ Both Kraepelin and Bleuler defined the multitude of different forms of schizophrenia, with 3 of Kraepelin’s original definitions still in use today: hebephrenic (disorganized), catatonic, and paranoid schizophrenia. Little has changed in the definition of the disease in the last century.^{17,18}

Modern treatment and attitudes towards schizophrenia

Early treatments of schizophrenia were restricted by a lack of knowledge of the brain and an immature understanding of the physical and neurochemical aspects of the disorder. Therefore, early 20th century treatment techniques were often crude and under-researched, based primarily on theory and lacking solid scientific evidence. Treatments for psychosis often involved sleep therapy, gas therapy, prefrontal leucotomy, and even injecting substances such as sulphur or oils into patients to induce fever.^{14,19} In the 1940s, electroconvulsive therapy (ECT) was developed as a treatment for certain forms of schizophrenia and became widespread by the 1950s and 1960s. It comprises an electric current that is transmitted through the brain to induce a seizure, temporarily alleviating some of the symptoms of psychotic disorders.¹⁴ However, a variety of side effects and complications from ECT have become apparent, ranging from headaches, distress and temporary memory loss to more severe consequences, such as long-term memory loss or changes in personality.¹⁴ It is the unfavourable side effects of these early psychotic treatments, combined with the development of antipsychotic drugs and an advancement in brain imaging (with the invention of computed tomography in 1973 by Godfrey Hounsfield),²⁰ that has made

their usage less common over the last 40 years.

In the 1950s, the first antipsychotic drug, chlorpromazine, was released onto the market and rapidly became the primary treatment for schizophrenia, making in the region of US\$75 million in its first year.²¹ Chlorpromazine is defined as a first-generation neuroleptic, as it acts by blocking the dopamine D₂ receptors in the brain and reduces the effects of dopamine secretions, theoretically normalizing particular neurochemical imbalances.²² In the 1990s, a new series of antipsychotics came onto the market: second-generation neuroleptics, namely risperidone, olanzapine, sertindole, and quetiapine.²¹ These new antipsychotic drugs claimed to offer better symptom control for patients in the treatment of schizophrenia. However, after a series of studies, it was revealed that the difference between effectiveness of second-generation antipsychotics and placebos was marginal, with 2 out of the 4 (sertindole and quetiapine) shown to be no more effective than conventional neuroleptics. One may speculate that this disparity could be due to competing interests involved in clinical trials or perhaps simply real-life factors that are difficult to truly replicate in controlled environments.²¹ Second-generation antipsychotics act on a variety of dopamine receptors, ranging from D₁ to D₅, and some also affect histamine, muscarinic, and

serotonin receptors. These neuroleptics therefore have much more distinct and specific side effects that vary from that of conventional drugs.²² Some of the most common antipsychotics in use are first-generation neuroleptics and, like chlorpromazine, are mainly derivatives of phenothiazine. These are primarily used to reduce anxiety and suffering in the patient and to lessen the positive symptoms such as hallucinations, delusions, and thought disjunction characteristic of schizophrenia.²²

The advancement of medical imaging techniques has had significant implications for the field of psychiatry, by initiating a shift in disease models. Schizophrenia became viewed as a medically treatable disease as the abnormal neuroanatomy of schizophrenic patients was highlighted.²³ This was most significant in disbanding psychodynamic speculations of the cause of schizophrenic symptoms and gave a more clinically focused edge to research into treatment. Modern theories about the causes of schizophrenia mainly revolve around a neurochemical imbalance, but psychosis has also been attributed to brain oxygen deficiency or other biological or anatomical causes, similar to that of epilepsy.²⁴

Conclusion

The history of schizophrenia is a history of changing attitudes towards mental illness: it is the progression from demonic possession to identifiable disease, and from exorcisms to neuroleptics. The documentation of insanity and mental afflictions throughout historical texts depicts the development of medical knowledge about the brain and its constituents, and also shows how the illogical and often disconcerting thoughts of schizophrenics can have an impact on prejudices of mental disease. As this article has progressed chronologically through periods of history, specifically concerned with mental disorder, there has been a notable change in public opinion of mental conditions, the most significant being in recent decades. However, there still remains a certain stigma surrounding schizophrenia, one that has migrated from associations of devilry to implications of violent crime. Although treatment methods are now available to dampen the positive symptoms of schizophrenia, science has yet to develop a cure. It is widely believed that schizophrenia is a complex disease which originates from the interaction between the patients' genes and environment, and future research into schizophrenia will continue to explore this interaction.

Learning Points*What is already known*

- The term “schizophrenia” describes a number of different diseases, presenting with a variety of cognitive, perceptual, and behavioural changes.
- No single cause of the disease has been identified, however, it is thought that both genetic and environmental factors are involved.
- Modern definitions of schizophrenia were significantly influenced by the work of Emil Kraepelin and Eugen Bleuler.

What this article adds

- A speculation into whether historical references of ‘madness’ could be attributed to cases of psychosis.

References

1. White PD, Clare AW. Psychological medicine. In: Kumar P, Clark M, editors. *Kumar and Clark's Clinical Medicine*. 7th edition. Edinburgh, UK: Elsevier Saunders; 2009. pp. 1216-8.
2. Fusar-Poli P, Politi P. Paul Eugen Bleuler and the birth of schizophrenia (1908). *Am J Psychiatry*. 2008 Nov;165(11):1407. DOI: 10.1176/appi.ajp.2008.08050714.
3. Kyziridis TC. Notes on the history of schizophrenia. *German J Psych*. 2005;8:42-8.
4. Bryan CP, editor/translator. Chapter XX: The heart and circulatory system. In: *The Papyrus Ebers*. Letchworth, UK: The Garden City Press; 1930. pp. 124-32.
5. Bloomfield M, editor/translator. Chapter 1: Charms to cure disease and possession by demons of disease (Bhaishagykni). In: *Hymns of the Atharva-Veda*. Oxford, UK: Clarendon Press; 1897. pp. 1-48.
6. Veith I, editor/translator. Chapter 1: Introduction to the Nei Ching. *Huang Ti Nei Ching Su Wen. The Yellow Emperor's Classic of Internal Medicine*. Berkeley, CA, USA: University of California Press; 1966:1-75.
7. Hippocrates, Jones WHS, translator. *Hippocrates*. Volume II. London, UK: Heinemann; 1923. p. 175.
8. Sarton G. *Galen of Pergamon*. Lawrence, KS, USA: University of Kansas Press; 1954. pp. 39-60.
9. Baas JH. *Outlines of the History of Medicine and the Medical Profession*. Volume II. Huntington, NY, USA: Robert E. Krieger Publishing Co.; 1971. pp. 359-61.
10. Lindemann M. *Medicine and Society in Early Modern Europe*. Cambridge, UK: Cambridge University Press; 1999. pp. 66-91,123-129.
11. Briggs R. *Witches and Neighbours: The Social and Cultural Context of European Witchcraft*. Oxford, UK: Blackwell; 2002. p. 19.
12. Almond P. Introduction. In: *Demonic Possession and Exorcism in Early Modern England*. Cambridge, UK: Cambridge University Press; 2004. pp. 1-42.
13. Kraepelin E. Chapter 7: Fundamental states. In: *Manic-Depressive Insanity and Paranoia*. Barclay RM, translator. Edinburgh, UK: E. & S. Livingstone; 1921. pp. 118-32.
14. Ackerknecht EH. A Short History of Psychiatry. Sulammith Wolff, translator. New York, NY, USA: Hafner Publishing Company; 1959. pp. 65-70,89-93.
15. Bleuler E. Dementia Praecox or the Group of Schizophrenias. New York, NY, USA: International Universities Press; 1955: pp. 227-244.
16. Southard EE, Noll R. Non-dementia non-praecox: note on the advantages to mental hygiene of extirpating a term [1919]. *Hist Psychiatry*. 2007 Dec;18(72 Pt 4):483-502. DOI: 10.1177/0957154X07082895.
17. Bleuler E, Zinkin J, translator. Dementia Praecox or the Group of Schizophrenias. New York, NY, USA: International Universities Press; 1950. pp. 3-12.
18. Dziegielewska SF. *DSM-IV-TR in Action*. Hoboken, NJ, USA: John Wiley & Sons; 2010. pp. 248-81.
19. Heyman A, Patterson JL Jr, Nichols FT Jr. The effects of induced fever on cerebral functions in neurosyphilis. *J Clin Invest*. 1950 Oct;29(10):1335-41. DOI: 10.1172/JCI102370.
20. Raichle ME. Functional neuroimaging: a historical and physiological perspective. In: Cabeza R, Kingstone A, editors. *Handbook of Functional Neuroimaging of Cognition*. 2nd edition. Cambridge, MA, USA: MIT Press; 2006. pp. 4-7.
21. Ross C, Read J. Chapter 9: Antipsychotic Medication: Myths and Facts. In: Read J, Mosher L, Bentall R, editors. *Models of Madness: Psychological, Social and Biological Approaches to Schizophrenia*. Brunner-Routledge: Hove, UK: 2004. pp. 101-3.
22. Joint Formulary Committee. *British National Formulary, 67th edition*. BMJ Group and Pharmaceutical Press: London. UK, 2014.
23. Kotrla KJ, Weinberger DR. Brain imaging in schizophrenia. *Annu Rev Med*. 1995;46:113-22. DOI: 10.1146/annurev.med.46.1.113.
24. Birchwood M, Jackson C. Chapter 3: Biological Aspects. In: *Schizophrenia*. Hove, UK: Psychology Press; 2001. pp. 35-61.